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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER
CHOW, C

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 07/31/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___3___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on __5/23/01__

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-27_ is/are pending in the applica

    4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-27_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    a)☐ All b) ☐ Some* c) ☐None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: _____

Office Action for
Applicant's Amendment
(5/23/2001)

1. Correction has been made for replacing the prior art, Thomas et al. with Doherty et al., from

    the headings of the claim rejections below, because the prior art from Thomas et al. is not

    depended upon or utilized, and it was due to the mistake of the speedy typing error.

2. New prior art from Nelson being utilized for the rejection of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such
that the subject matter as a whole would have been obvious at the time the invention was made to a person having
ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in
which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al.

    (US 5,873,030) in view of Nelson (US 6,032,132), and further in view of Doherty et al. (US

    5,333,184).

Mechling et al. teach **claim 1**, "an apparatus for managing call billing records of

communications (comm) network users comprising: a communications network operative to

carry user calls; a gateway communicating with the network and operative to collect call

billing data from the network in a first data structure format; a communication link coupled

to the gateway; and a network processor communicating with the gateway via the

communication link and operative to receiver the collected call billing data in the first data

structure format". See in abstract, in Fig. 2c, 2d, it shows a method and system for

nationwide mobile-telecommunications billing, comprising the communication network as

shown in Fig. 1-2d for carrying user telephone calls. The national mobile service platform

210 (NMSP) comprises mobile-access-tandem, 224, for communication with the other

carriers 250, 260, and the mobile-switching-centers, 232A-F of the Local-mobile-network

112A-F. The NMSP acts as a gateway to communicate with the local billing collection

network 112A-F. In abstract, it shows the local-mobile-networks are communicatively

connected by the signaling network to the NMSP. The NMPS collects the call traffic events

records for all calls incurred in the Local-mobile-network and generates billing information.

The NMSP uniforms the collected data by converting the collected data into the Master-call

-detail-records (MCDR). Also, refer to column 2, line 37 to column3, line 9; column 3, line

51 to column 4, line 30; column 4, line 49 to column 6,line 5; column 18, line 45-60. In table

1, it shows the MCDR record.

Mechling et al. does not explicitly indicate the conversion to the second format.

Nelson discloses"…convert the collected call billing data from the first data structure format

to a second data structure format". See in Fig. abstract, 1-4; in column 1, line 6-10, it shows a

telecommunication cost access management system for verifying the billing charges, the   performance

between the communication carrier service providers. In Fig. 5, it shows the different data format 48 has

the drop down list of formats, the Cabs, Centrex, and Cris formats. The cost processor of the

management system receives the billed charges in variety of forms, and the cost processor converts the

variety of billed forms received to the second format for processing, see in abstract, in col. 16, line 5-16,

in column 16, line 66 to col. 17, line 8. In col. 17, line 31-34, it shows the means for converting the billed

charges from the first format to a second format. In Nelson's claim 2, it also shows the automatically

identifying predetermined information for any of said plurality of billing entries for validating the billed

charge rate and reference charge rate. After billing validation, in abstract, and in col. 2,line 17-27, it

shows he transmittal file is generated for sending report to the communication carrier service providers.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify and add Nelson's billing formatter for converting the first file format

to second format; automatic identifying predetermined information from plurality of billing

entries, to Mechling et al., such that the system could handle different data formats.

Mechling et al. as modified above does not explicitly indicate the transmit of second

data structure of the billing data.

Doherty et al. teach "with a data network..., and transmit the call billing data in the

second data structure format to the data network for billing processing". See in abstract,

in Fig. 1, it shows the system utilizes the exchange message interface message format, EMI,

carrying the primary interexchange carrier indicator for call billing purpose associated with

the subscriber. In column 7, line 52-61, column 8, line 5-15, column 9, line 22-31, it shows

the system generates the AMA message format for the call, converts said AMA format to

the EMI message format, and transmits the EMI message record format to the call rating

system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify and add Doherty et al.'s transmitting in the EMI second format to the

call rating system, to Mechling et al. as modified above, such that system could be upgraded

and more flexible of handling a second billing data format.

Regarding **claim 2**, it has shown above in claim 1, the national mobile service platform

NMSP acts as a gateway to communicate with the local billing collection network 112A-F.

Thus, the gateway comprises a signaling gateway for generating master call detail record

MCDRs, as also shown in column 2, line 57-67. The local mobile networks are

communicatively connected by a signaling network to a NMSP.

Mechling et al. teach **claim 3**, "...wherein the network processor comprises an interface that

mates with the communication link". See in Fig. 2d, it shows the NMSP 210 comprises the

interface 224, the mobile access tandem, for interfacing with the different Local-mobile-

networks, the other carries, 250, 260.

Mechling et al. teach **claim 4**, "...network polls the gateway to collect the collected call

billing data in the first data structure format". Refer to the disclosure discussion in claim 1,

in column 18, line 45-60, it shows collecting traffic information at Local-mobile-network

and formatting the collected call traffic information into a first MCDR structure format.

4. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al.

in view of Nelson, and further in view of Doherty et al., as applied to claim 1 above,

and further in view of Witzman et al. (US 5,737,399).

Mechling et al. as modified above does not explicitly indicate the raw data of the call event

records (CERs).

Witzman et al. teach **claim 5**, "...first data structure format comprises raw ASG call event

records (CERs). See in abstract, Fig. 2A, it shows a network's system architecture having

the centralizing storage and verification element. In column 1, line 18-21, in column 3, line

4-12, in column 4,line 63 to column 5, line 4, it shows the captured billing records comprises

the call event record (CER).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify and replace the first data format of Mechling et al., with the CER first

format from Witzman et al., such the first format could be easily converted to the other

secondary structured formats.

Regarding **claim 6**, the second Bellcore AMA BAF format has shown above in claim 1.

Regarding **claim 7**, the disclosure above in claims 1-4 has shown the claimed features for

the data network communicating with the network processor and the receiving of the second

data format.

5. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al.

in view of Jaiswal et al., and further in view of Doherty et al., as applied to claim 1 above,

and further in view of Witzman et al., and further in view of Kay et al. (US 5,575,894).

Mechling et al. as modified above does not explicitly indicate the local traffic system.

Kay et al. teach **claim 8**, "...data network comprises a local traffic system (LTS)". See in

abstract, Fig. 1-3, and in column 3,l ne 3-25, it shows a virtual foreign exchange service

system having at least one interoffice trunk carries communication traffic between the local

exchange central office switched system and the foreign exchange central office switching

system for billing purpose having the selective procedures.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify and add Kay et al.'s local exchange central office of the local call traffic

to Mechling et al. as modified above, such that the local billing data could be easily collected

by the local exchange central office.

Regarding "the second data structure format ...AMA format". Refer to the above disclosure

discussion in claims, 1-4.

Mechling et al. teach **claim 9**, "...a network platform". See in Fig. 2d, it shows the NMSP

platform for processing the call billing data records.

Regarding **claim 10**, the claimed features are covered by the disclosed patents shown above

in claims 1-4. Therefore, it is rejected for the same rationale.

6. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al.

in view of Jaiswal et al., and further in view of Doherty et al., as applied to claim 1 above,

and further in view of Herbert (US 5,333,183).

Mechling et al. as modified above does not explicitly indicate the periodically receiving of

the billing data, although Thomas et al. teach in column 2, line 40-44, the service bureau provides the instructions

for paying the bill of a particular order in a periodic intervals, as shown in claim 1 above.

Herbert teaches **claim 11**, "data network is operative to periodically receive the collected call

billing data in the second data format". See in column 11, line 67 to column 12, line 47, and in column 28, line 22-31, it shows processor is periodically checks the statistics of the call message-detail-record MDR data records for billing purpose.

Regarding "data network", refer to the disclosure in claim 1 above, from Thomas et al., the service bureau S responding to the data network via automatic teller machine ATM.

Herbert teaches **claim 13**, "...network processor polls the gateway at preset interval". See in column 28, line 22-31, and in table 1, it shows the schedules for periodically running the processes to invoke the administrative processor interface APIF for collecting the message processing. Also, see claim 16, 35, as taught by Herbert.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Herbert's scheduled periodically polling of the APIF for collecting call records, to Mechling et al. as modified above, such the billing collection could update the records according to the different time of the days.

Mechling et al. as modified above does not show the AMA code 625 format.

Herbert teaches **claim 15**, ".....data network comprises a local traffic system (LTS), and wherein the received call billing data in the second data structure format comprises an industry standard automatic message accounting (AMA) structure code 625 format that is used to implement billing processing". In the above, it has shown the local exchange central office. Regarding the AMA code 652, See in Table 7, it shows the structured AMA code 625 format is utilized in the MDR data record system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify and add Herbert's AMA code 625 format to Mechling et al. as modified

above, such that the second structure format could be specified as the AMA code 625 format.

Regarding **claim 12**, the claimed features are covered by the disclosed patents shown above

in claim 4. Therefore, it is rejected for the same rationale.

Regarding **claim 14**, the claimed features are covered by the disclosed patents shown above

in claim 11. Therefore, it is rejected for the same rationale.

Regarding **claim 16**, the claimed features are covered by the disclosed patents shown above

in claim 3. Therefore, it is rejected for the same rationale.

7. Claims 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al.

in view of Nelson, and further in view of Doherty et al., as applied to claim 1 above, and

further in view of Liu et al. (US 5,898,780), and further in view of Wang (US 5,991,746).

Mechling et al. as modified above does not explicitly indicate the first and second

computers.

Liu et al. teach **claim 17**, "...providing a first computer device, a second computer device,

and a communication link, the first computer device communicating with the network and

the second computer device communicating with the first computer device via the

communication". See in Fig. 1, in abstract, in column 2, line 38-65, sever software computer

42 of the billing module system 38 is in communication with the server computer 14 and remote computer 26 for collecting billing records. In column 1, line 9-25, it shows the Internet Service Provider ISP.

Liu et al. teach "collecting call billing data with the first computer device in a first data structure format". See in Fig. 1, and Fig. 3, it shows the local network ISP 63 having billing system 38, and ISP 64 having the billing system 69 are collecting call billing data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Liu et al.'s billing system module with computer server for local ISP to Mechling et al. as modified above, such that the billing system could collect and process the billing records from the internet.

Mechling et al. as modified above does not explicitly indicate the data communications (comm) protocol.

Wang teaches "transferring the call billing data using a data comm protocol...computer device". See in abstract, it shows the data transferring protocol, TFTP protocol, is utilized for the billing data collector.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Wang's TFTP data transferring comm protocol to Mechling et al. as modified above, such that the transferring of the billing data could be according to the protocol specified in the TFTP data comm protocol.

Regarding the "converting the call billing data with the second computer device from the first data structure to a second data structure format", Mechling et al. teaches the

converting of the different billing data format into the master-call-detail-records MCDR

format at the national-mobile-service-platform (NMSP). Refer to claims 6, 15 above for the

second Bellcore AMA 625 format.

Regarding "data network" and "transmitting the call billing data in the second data structure

format to the data network for billing processing", refer to the patent disclosure for claim 1

above, from Thomas et al.

Regarding **claims 18, 19**, the claimed features are covered by the disclosed patents shown

in claim 17 above. Therefore, it is rejected for the same rationale.

Regarding **claims 20, 21, 22,** the claimed features are covered by the disclosed patents shown

in claims 1, 3 above which also provides the disclosed features for claims 20-22.

Mechling et al. teach **claim 23**, "...routing call billing data for a user via the network

processor to a data network". See in Fig. 3f, in column 10, line 6-9, it shows in step 314

the MCDR is transmitted to the user destination data network

8. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al.

in view of Nelson, and further in view of Doherty et al., as applied to claim 1 above, and

further in view of Jaiswal et al. (US 6,002,754).

Mechling et al. as modified above does not explicitly indicate the invoice.

Jaiswal et al. teach **claim 24**, "...generating an invoice format for data network for delivery

to individual users". See in column 4, line 40-54, it shows the format processor sends billing

data, invoice, to customer supplied billing system 60.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify and add Jaiswal et al.'s billing data invoice to Mechling et al. as

modified above, such that the user could directly receive the billing invoice information.

Regarding **claim 25**, the claimed features are covered by the disclosed patents shown

in claim 3 above.

Regarding **claim 26**, the claimed features are covered by the disclosed patents shown

in claims 1, 3, 4 above.

9. Claims 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al.

in view of Nelson, and further in view of Doherty et al., as applied to claim 1 above, and

further in view of Liu et al., and further in view of Wang, and further in view of Witzman

et al. (US 5,737,399).

Mechling et al. as modified above does not explicitly indicate the generating of the alarm

signal.

Witzman et al. teach **claim 27**, "...generating an alarm signal with the network processor".

See in column 2, line 31-55, in column 3, line 13-19, in column 12, line 47-6, it shows the

alarm signal is generated according to the collected data from NIC and the corresponding

data stored in the network database. Also, Herbert shows the alarm display and alarm report

in Fig 19.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify and add Witzman et al.'s alarm generating of the network information

concentrator (NIC) to Mechling et al. as modified above, such that the errors in the billing

data collection system could be detected from displayed the alarms.

Response to Arguments
and
Conclusion

10. Applicant's arguments with respect to claims 1-27 have been considered but are moot in

view of the new ground(s) of rejection.

Regarding applicant's arguments for the no reference named Thomas et al., it has been corrected by

utilizing Dorherty et al.; the argument for no teaching of the second data structure format and the opposite

direction of the data flow, They are disclosed by the newly introduced prior art Nelson. Thus, the arguments

are moot. The claims 1-27 are remaining in the rejection manner, to avoid the conflict

situation to the prior art.

11. The Group and/or Art Unit location of your application in the PTO has changed.

To aid in correlating any papers for this application, all further correspondence regarding this

application should be directed to Group Art Unit 2684.

Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Charles Chow whose telephone number is

(703)-306-5615.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Daniel Hunter, can be reached at (703)-308-6732.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D. C. 20231

Or Faxed to: (703)-872-9314 (for formal communications intended for entry)

Or hand-delivered to: Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth

Floor, Receptionist.

For general inquiry or relating to the status of this application should be directed

to the Group Receptionist whose telephone number is (703)-306-0377.

C. Chow

July/19/2001.

DANIEL HUNTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600